

-2-

Amendment to the Claims:

1. (Currently Amended) A diagnostic medical imaging system comprising:
an imaging apparatus having an examination region in which a subject being examined is positioned, said imaging apparatus obtaining a plurality of first image slices of the subject, said first image slices having a first resolution thickness;
5 a storage device into which the first image slices are loaded;
a data processor which combines subsets of first image slices to generate a plurality of second image slices having a second resolution lower thickness greater than the first resolution thickness, said subsets each including a number n of contiguous first image slices; and,
10 a display having a plurality of view ports including a first view port which depicts one or more selected second image slices and a second view port which depicts one or more first image slices which are constituents of one of the second image slices depicted in the first view port, the first and second slices being parallel and viewed from the same direction.
2. (Original) The diagnostic medical imaging system according to claim 1, wherein the data processor combines the subsets using a uniform averaging projection.
3. (Original) The diagnostic medical imaging system according to claim 1, wherein the display includes a third view port which depicts a reference image which is viewed from a direction transverse to the first and second image slices.
4. (Original) The diagnostic medical imaging system according to claim 3, wherein the third view port superimposes over the reference image depicted therein graphical representations of the relative locations of the first and second images slices shown in the first and second view ports, respectively.
5. (Original) The diagnostic medical imaging system according to claim 1, further comprising:
a storage device into which the second image slices are loaded.

-3-

6. (Currently Amended) A diagnostic medical imaging system for examining a subject, said diagnostic medical imaging system comprising:

acquisition means for obtaining a plurality of first image slices of the subject, said first image slices corresponding to a first thickness;

5 combining means for generating a plurality of second image slices from combined subsets of first image slices, said subsets including a plural number n of contiguous first image slices, said second image slices corresponding to a second thickness which is n times the first thickness, the first and second slices being parallel to each other;

10 first display means for displaying selected ones or more selected of the plurality of second image slices; and,

second display means for displaying one or more of the first image slices included in the subset used to generate one the second image slices being displayed by the first displaying means, the displayed first and second image slices being viewed from a common direction.

15 7. (Original) The diagnostic medical imaging system of claim 6, further comprising:

third display means for displaying a reference image which includes superimposed therein graphical representations of the relative locations of the second and first image slices displayed by the first and second display means, respectively.

8. (Original) The diagnostic medical imaging system of claim 7, further comprising:

means for updating the display of the first, second and third display means in response to a selection of a point in one of the same, such that each of the first, second and third display means displays the selected point.

9. (Original) The diagnostic medial imaging system of claim 7, wherein the reference image is selected from a view consisting of a coronal view, a sagittal view, and a multi-planar reformatted view.

10. (Original) The diagnostic medical imaging system of claim 6, further comprising:

means for detecting small objects contained in the subsets of first image slices, said small objects having dimensions in the direction of slice thickness less than the 5 second thickness; and,

means for projecting outlines of detected small objects onto the second image slices corresponding to the respective subsets.

11. (Original) The diagnostic medical imaging system of claim 10, wherein the outlines of detected small objects are color coded to distinguish them from one another.

12. (Original) The diagnostic medical imaging system of claim 6, further comprising:

means for storing the first and second image slices.

13. (Original) The diagnostic medical imaging system of claim 6, further comprising:

means for sequentially progressing through the plurality of second image slices such that each in turn is displayed on the first display means for review.

14. (Original) The diagnostic medical imaging system of claim 13, further comprising:

means for designating regions for close review such that during the sequential progression, when a designated region is reached, a reviewer is directed to the first 5 image slices for review.

-5-

15. (Currently Amended) A method of diagnostic medical imaging, said method comprising:

- (a) obtaining a plurality of first 2D images of a subject, said first images representing a plurality of contiguous slices of a first thickness;
- 5 (b) generating a plurality of second 2D images from subsets of the first images by merging together the first images in each subset, said subsets including first images for a number of the contiguous slices they represent, said second images representing slices of a second thickness which is greater than the first thickness;
- (c) designating regions of the subject for close review by a reviewer;
- 10 (d) sequentially displaying the second images for review by the reviewer; and,
- (e) displaying the first images from a same viewing direction as the second images are displayed for review by the reviewer when the designated regions are reached.

16. (Previously Presented) The method according to claim 15, wherein step (b) includes:

combining the subsets of the first images via uniform averaging projection.

17. (Previously Presented) The method according to claim 15, further comprising

- displaying a reference image of the subject; and,
- superimposing in the reference image graphical representations of the relative
- 5 locations of displayed first and second images.

18. (Previously Presented) The method according to claim 15, further comprising:

- detecting small objects contained within the subsets of the first images; and,
- projecting outlines of the detected small objects into the second images
- 5 corresponding to the respective subsets.

-6-

19. (Cancelled)